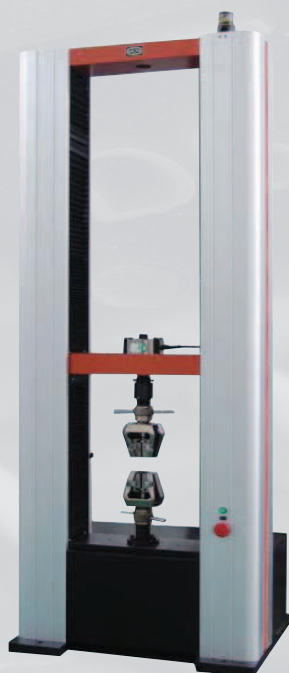


# WDW Series Computer Controlled Universal Testing Machine

## Main application:

WDW Series is a new kind of electronic universal testing machine produced by TIME-Shijin Group, which adopts the most advanced and reliable load frame structure of ball screw electric mechanical universal testing machine of the world. The driving system adopts AC servo timing system and motor from Panasonic Co. Ltd. of Japan. The PC controlling system is able to realize the close-loop control of the parameters such as loading force, specimen deformation, and crosshead stroke etc. The system realizes the screen display, online diagram drawing, testing curve changing, fold curve collation and auto analysis of test results, creation of test report. Especially, the application of the control mode can be manual control or computer programming control which makes the cyclic tests become available.

By switching simply of different accessories, WDW series Universal testing machine can make tests on most of materials and components to suit your needs.

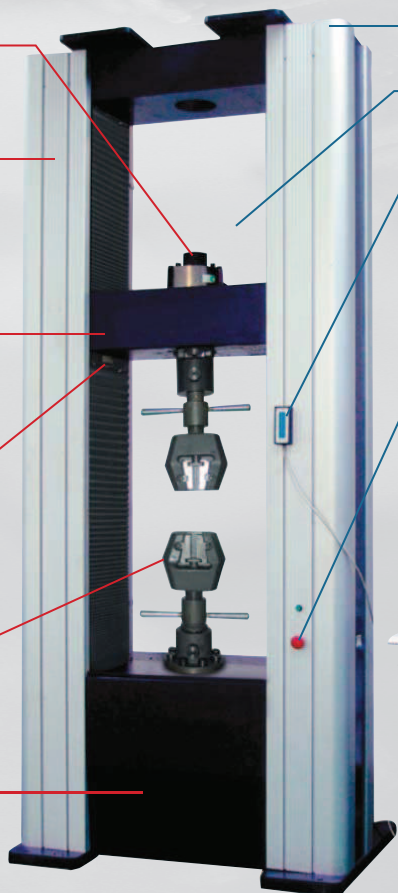


WDW-10E



WDW-50E

- LOAD CELL**  
Overload protect High accuracy Force transducer
- MACHINE COVER**  
Aluminum alloy cover and streamlined design; Optional color label on side of cover according to customized need.
- CROSS HEAD & STRUCTURE**  
High intensity testing machine structure and crosshead, assure the accuracy during the tests.
- LIMIT SWITCH**  
Cross head displacement restrict, Un-tangency photoelectric transducer  
Safe and reliable to control
- TEST ACCESSORY**  
Exchangeable testing accessory to satisfy different test needs. Easy and reliable to change
- SERVO MOTOR & SYSTEM**  
Full digital AC servo and high accuracy servo motor, High efficiency, Low noise and stable load transmission



- PHOTOELECTRIC ENCODER**  
High accuracy photoelectric coder
- TESTING AREA**  
Large testing area, suitable for most of the test requirements.
- MANUAL CONTROL**  
A separate control box is set to provide multi-controlling of crosshead up/down to suits your needs.
- EMERGENCY STOP**  
To lock the equipment fast and reliably when emergency situation occurs.
- SOFTWARE** (refer to software part)  
Analog instrument technology with friendly operation interface.
- CONTROL CARD** (refer to software part)  
Plug In PCI control card, suits all kinds of personal computer and main board. Full digital measure and control circuit provided with Load, displacement & Deformation different measuring channel. Close loop control by simply software Configuration.



## Features:

Complete computer controlled: The whole measuring and controlling system adopts specific PC control card used for testing machines, realizing the data zero and plus adjustment, which has very high reliability.

Supporting multi-transducers

Realizing the database management of the test data which are stored according to the standard format; facilitating other software to analyze and transfer.

Perfect programming by auto program control, every control mode can smoothly shift to another one. Fulfilling the test requirement of all kinds of materials with every test standard home and abroad.

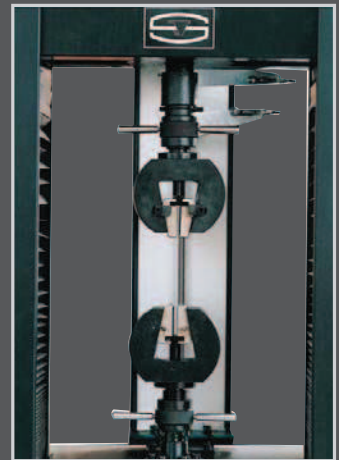
Control software has the auto-adjusting function of test hardness, which assures that the system works with every kind of specimen hardness.

Perfect graphic function realizing the arbitrarily magnifying, decreasing, equaling, adding, indicative display and print of all kinds of test curves, the test point searching as well as the simultaneous display and print of several kinds of test curves. Data processing supposes self-disposing and input disposing of graphic human computer interaction, which facilitates the check and contrast of the test result.

The user can self -define the output of the test report, which makes the report format have very high flexibility.

Modularization design facilitates the software upgrading, function spreading as well as the second development.

## Standard Accessory:



Tension



Compression

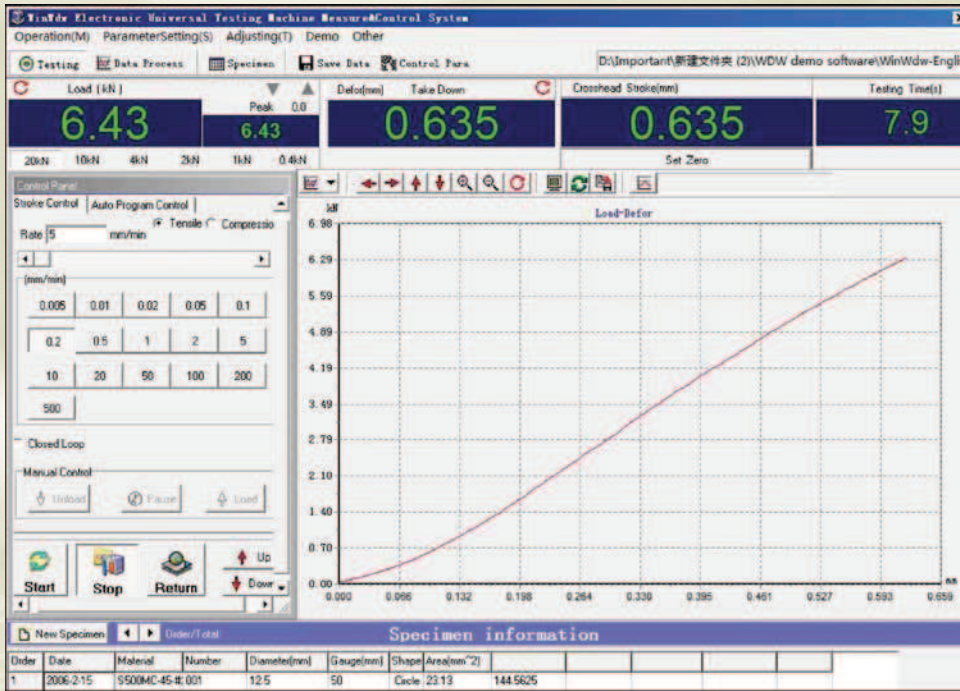


Bending

## Standard Accessory for WDW Series:

Tension grip jaws (Wedge action Grips)	1 set
Grips for round specimen	4pcs for each
Grips for flat specimen	4pcs for each
Compression test attachment	1 set
Bending test attachment	1 set
Tool kit	1 set
Extensometer	1 set
Photoelectric coder	1 pc
Load cell	1 pc
Data-processing system: (TIME plug-in ready to use controller)	1 set
TIME software: V 1.90.P (or higher version)	1 set
PC+Printer	1 set
Servo speed adjusting system for WDW	1 set





Software main interface

### WinWdw Control Software

#### Easy to control and friendly interface

MS windows based interface, easy and fast to reach different functions, suitable for most of operators using habits.

#### Full digital display and computer control

Adopt TIME-SHIJIN Controller, Fast response and reliable to parameter gathering. Realize the digital adjustment and zeroing of LOAD, DEFORM and DISPLACEMENT as well as PID parameter adjusting.

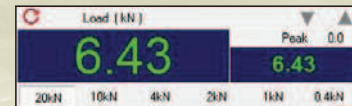
#### Manual or Program control of test process

WinWdw Software provides multi functional control mode: Stroke & Program.

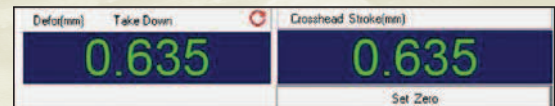
In stoke control mode, operator can define customized test speed to conform with different test standard. Preset limit position and return position will secure the safety and return the crosshead automatically after test finished.

In program control mode, the testing machine is controlled by conditional programs, operator can input each condition to regulate test process, software can realize constant parameter control through this function.

Step	Control Mode	Control Parameter	Jumping Term
1	constant speed stroke	stroke speed:7.2mm/min	load up to1kN,jump to step 2
2	constant speed load	load speed:0.5kN/s	load up to7kN,jump to step 3
3	load keeping	keeping target:7kN	keeping time:30s,jump to step 4
4	constant speed load	load speed:0.5kN/s	load up to10kN,jump to step 5
5	load keeping	keeping target:10kN	keeping time:30s,jump to step 6
6	constant speed stroke	stroke speed:18mm/min	load up to1kN,jump to step 7
7	stop		



Test load and peak value display



Deformation and stroke display

#### Multilevel Authorization Access

The software regulated different access level to protect machine calibration parameters. Reliable to secure the information safety and easy for software maintenance.

Enroll window

Enroll identity: Superior operator

Input password: \*\*\*\*\*

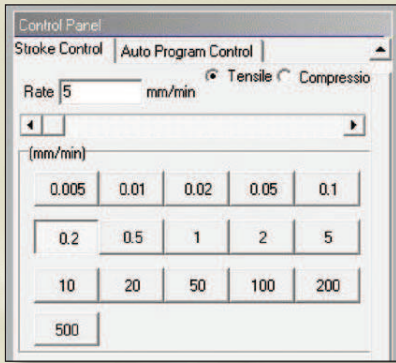
Change Password

New password: [ ]

New password confirm: [ ]

Buttons: Ok, Cancel, Change password





Test speed manually adjustable

### Perfection of diagramming functions

Realize the testing diagram online display and reproduction.

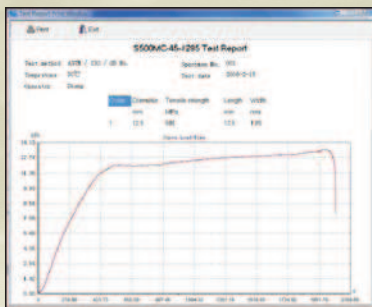
Zoom in or out the test diagram at any place with any rate.

Auto suit the diagram according to display resolution.

"Diagram fold" to enable with material difference analysis.

Print "section diagram" function

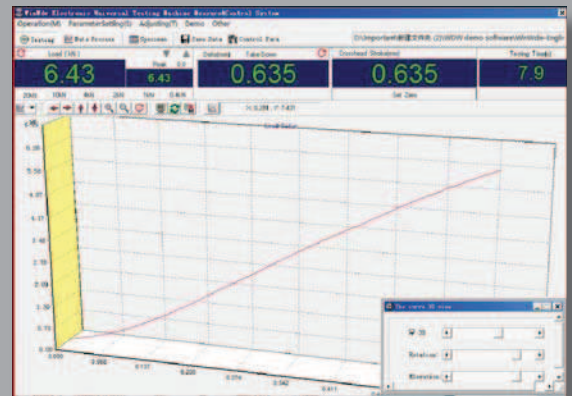
Coordinates point tracing to check the test results in each point.



Single material test report

Order	Force (N)	Displacement (mm)	Force (kg)	Displacement (mm)
0	0.0000	0.0000	0.000	0.000
1	0.0450	0.0000	0.000	0.000
2	0.0456	0.0000	0.000	0.100
3	0.0480	0.0025	0.002	0.140
4	0.0500	0.0037	0.004	0.180
5	0.0562	0.0037	0.004	0.220
6	0.0651	0.0075	0.007	0.260
7	0.0746	0.0100	0.010	0.300
8	0.0876	0.0125	0.012	0.340
9	0.1018	0.0162	0.016	0.380
10	0.1178	0.0200	0.019	0.420
11	0.1376	0.0225	0.022	0.460
12	0.1579	0.0262	0.026	0.500
13	0.1729	0.0300	0.030	0.540
14	0.1906	0.0325	0.032	0.580
15	0.2090	0.0362	0.036	0.620
16	0.2267	0.0400	0.040	0.660
17	0.2451	0.0437	0.044	0.700
18	0.2623	0.0461	0.046	0.740
19	0.2800	0.0500	0.050	0.780

Coordinates point test report



3-D coordinates display

Index	Number	Diameter	Width	Flange	Max Load	Min Strength	Elastic modulus	Upper yield strength	Rp	Ft	A	Z	Lower yield strength	Material
		mm	mm	mm	kN	MPa	GPa	MPa	MPa	MPa	%	%	MPa	
1	1	12.8	1.08	53	113.5	585	0	5	520	0	0	0	0	5500AC-45-125
2	2	12.8	1.08	53	113.5	585	0	5	520	0	0	0	0	5500AC-45-125
3														
4														
5														
Max Value		12.8	1.08	53	113.5	585	0	5	520	0	0	0	0	
Min Value		12.8	1.08	53	113.5	585	0	5	520	0	0	0	0	
Average Value		12.8	1.08	53	113.5	585	0.0000	5.0000	520.0000	0.0000	0.0000	0.0000	0.0000	

Batch material test report

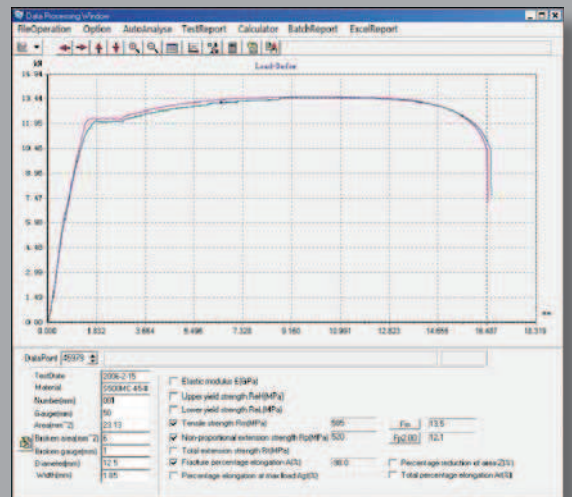
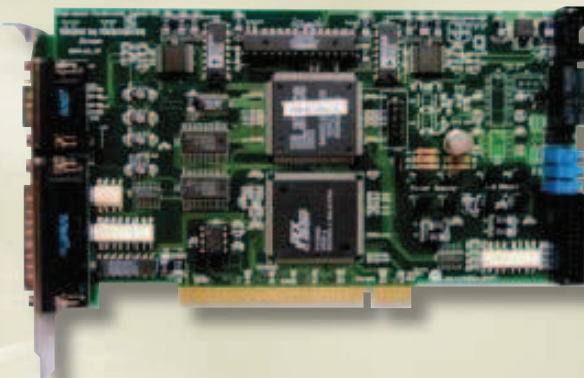


Diagram fold



### TIME-SHIJIN Controller

Plug In ready to use PCI control card, suits all kinds of personal computer and main board. Full digital measure and control circuit. Provided with Load, displacement & Deformation different measuring channel. Close loop control by simply software configuration.

### Test report creation

- The WinWDW provide different way to create test report
- Single material test report
- Batch material test report
- Customized test report
- Coordinates point test report

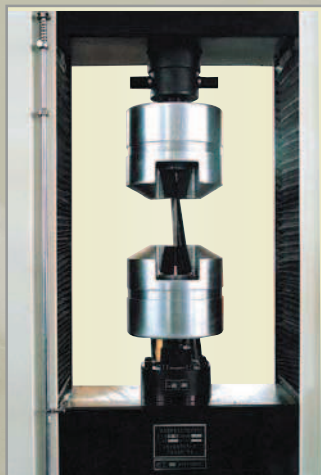


### Main Technical Specification

Specification	WDW-300E	WDW-200E	WDW-100E	WDW-50E	WDW-20E/10E/5E	WDW-2E/1E
Features	Adopting speed-adjusting system and motor full digital measuring and controlling system					
Intensity (kn/mm)	600	400	300	250	80	10
Load range	0.4%-100% of the max load					2%-100% of the max load
Accuracy of test load	< ±1%(accuracy level±0.5%)					< ±1%
Frame accuracy	all of the assemblies are made in high precision processing centre machine tools, guarantee the accuracy of the machine					
Precision of Ball Screws	16µm/300mm E level all the ball screw are made by milling					
Accuracy of deformation	< ±1% within the 2%-100% full range of the extensometer					
Crosshead stroke accuracy	0.001mm					0.01mm
Accuracy of indication value of test load	< ±1% (accuracy level±0.5%)					
Resolution of load	1/200000 of the max load force					
Scope of deformation measure (normal extensometer)	2%-100% FN					
Accuracy Indication of deformation (normal extensometer)	within ±0.5% of indication value					
Scope of deformation measure (High deformation extensometer)	10mm-800mm					
Accuracy Indication of deformation (High deformation extensometer)	within the ±0.5% of the value					
Resolution of crosshead stroke	0.001mm					
Adjustment scope of test speed under Load control mode	0.005-5%FN/S					
Accuracy of test speed under Load control mode	Test Speed<0.05%FN/s, within the ±2% of the preset value, while Test Speed≥0.05%FN/s, within the ±0.5% of the preset value					
Adjustment Scope of deformation rate	0.005-5%FN/S					
Accuracy of deformation rate	Test Speed<0.05%FN/s, within the ±2% of the preset value, while Test Speed≥0.05%FN/s, within the ±0.5% of the preset value					
Adjustment scope of stroke speed	0.005mm/min-500mm/min					0.05mm/min-500mm/min
Accuracy of stroke speed	Test speed<0.01mm/min, within the 1.0% of installed value, while test speed≥0.01mm/min, within the 1% of the installed value					
Scope of the constant load deformation and displacement control	0.5%-100%FN/s					
Accuracy of the constant load deformation and displacement control	Installed value≥10%FN, within the 0.1% of the installed value; while installed value<10%FN, within in the 0.2% of the value					
Length of the test space (mm)	600	600	600	600	800	800
Width of the test space(mm)	575	600	600	575	370	350
Dimension (mm)	1110×785×2525	1100×770×2558	1010×750×2210	945×654×2176	775×500×1717	520×350×1500
Test accessory	Standard accessory with different customized test accessory					
Weight(kg)	2000	1560	1100	700	250	100
Power (Kw)	5	3	1.5	1.5	0.4	0.5
Type of machine	Floor type				Table/floor type	Single column table type



**Other Important Accessories** (Frequent use optional accessory):



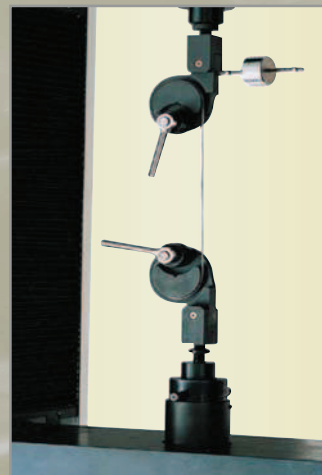
Automatic hydraulic tension grip



High-low temperature chamber



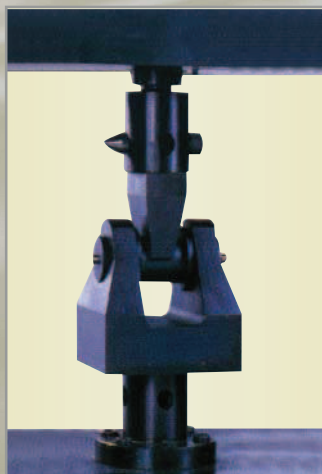
Elevated temperature furnace



Steel wire winding tension grip



Step-type gripping jaws



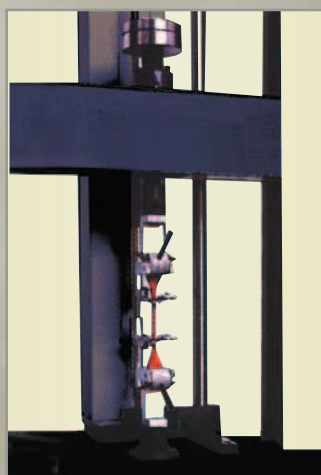
Shear attachment



Film & paper tension grip



Puncture attachment



Eccentric wheel tension grip



F900A auto clamp tension grips



High deformation extensometer



Spring tension grip



**Other Important Accessories** (Frequent use optional accessory):



Manual tension grip



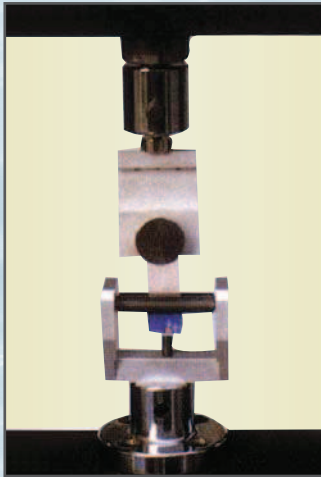
Opposite clamping grip



Load cell



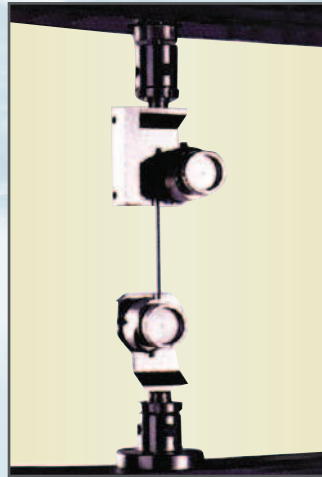
Small deformation extensometer



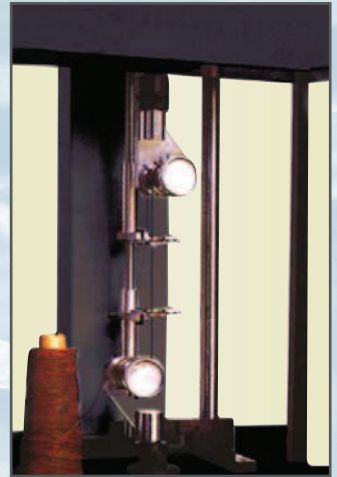
Peeling test grip



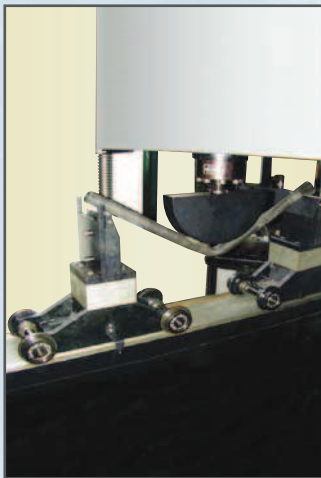
Rope & string grip



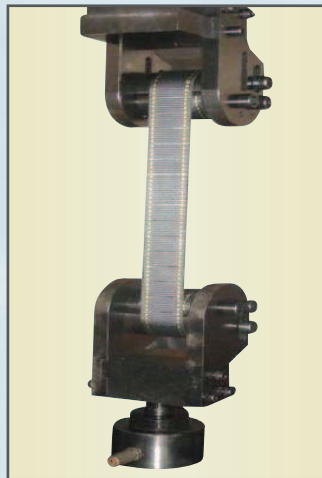
Hard steel wire grip



Silk & thread tension grip



Bending test attachment for automobile bumper



Belt shape tension test attachment



Metal piece cupping test accessory



Pneumatic opposite clamping grip